

WHAT IS CLAIMED IS:

1. A system for delivery of media files to a particular digital media playback device, comprising:

a content server operable to:

receive device-identifying information obtained from a particular digital media playback device, and

distribute media files in response to the received device-identifying information; and

a download manager operable to:

obtain device-identifying information from a particular digital media playback device that is in communication with the download manager,

forward the obtained device-identifying information to the content server over a public communication network,

receive media files over the public communication network from the content server, and

distribute the received media files to the particular digital media playback device for playback on the particular digital media playback device.

2. The system of claim 1, wherein the content server comprises:

a user database containing user information uniquely identifying one or more users;

a content database containing multiple media files and metadata associated with each media file of the multiple media files;

a usage rights database containing usage rights information for each media file in the content database;

a license server for issuing content-enabling licenses;

a device database containing device information uniquely identifying one or more device types; and

an application server operable to communicate with the user database, the content database, the license server, the usage rights database, the device database and the download manager.

3. The system of claim 2, wherein the application server is operable to perform the following steps in response to a request for one or more media files from the download manager:

obtain user information from the user database based on the device-identifying
5 information;

obtain one or more encrypted media files and metadata associated with the encrypted media files from the content database;

obtain usage rights information for the one or more encrypted media files from the usage rights database;

10 obtain device information from the device database, the device information describing functional capabilities of the digital media playback device;

forward the obtained user and device information to the license server and receive a license for the encrypted digital media files; and

15 distribute the encrypted media files and the license to the download manager over the public communication network.

4. The system of claim 2, wherein the application server is operable to perform the following steps in response to a request for one or more media files from the download manager:

20 obtain user information from the user database based on the device-identifying information;

obtain one or more encrypted media files and metadata associated with the encrypted media files from the content database;

25 obtain usage rights information for the one or more media files from the usage rights database;

obtain device information from the device database, the device information describing functional capabilities of the digital media playback device;

forward the obtained user information to the license server and receive a license for the encrypted media;

30 decrypt the encrypted media files using the received license;

re-encrypt the decrypted media files, using the device information and usage rights information, to a file format that is playable only on the particular digital media playback device; and

distribute the re-encrypted media files to the download manager over the public communication network.

5. The system of claim 2, wherein the application server is operable to perform the following steps in response to a request for one or more media files from the download manager:

obtain user information from the user database based on the device-identifying information;

obtain one or more media files and metadata associated with the media files from the content database;

obtain usage rights information for the one or more media files from the usage rights database;

obtain device information from the device database, the device information describing functional capabilities of the digital media playback device;

forward the obtained user and device information to the license server and receive a license for the digital media files; and

distribute the media files and the license to the download manager over the public communication network.

6. The system of claim 2, wherein the application server is operable to perform the following steps in response to a request for one or more media files from the download manager:

obtain user information from the user database based on the device-identifying information;

obtain one or more media files and metadata associated with the media files from the content database;

obtain usage rights information for the one or more media files from the usage rights database;

obtain device information from the device database, the device information describing functional capabilities of the digital media playback device;

encrypt the media files, using the device information and usage rights information, to a file format that is playable only on the particular digital media playback device; and

5 distribute the encrypted media files to the download manager over the public communication network.

7. The system of claim 2 wherein the user database further contains offer information.

10 8. The system of claim 2, wherein the device database contains device information uniquely identifying one or more type of devices, the device information comprising make, model, manufacturer, and functional characteristics.

15 9. The system of claim 2, wherein the content server further comprises a web server that is connected to the application server and to the public communication network, thereby allowing a user to communicate with the content server through a web browser.

20 10. The system of claim 9, wherein the web server further is operable to provide representations of media files that are playable on the particular digital media playback device, the representations being operable to be viewed by the user in the web browser.

25 11. The system of claim 9, wherein the application server further is operable to:
 receive user requests for controlling the function of the particular digital media playback device, the user requests being supplied by a user through the web browser; and
 generate control commands to the download manager, the control commands instructing the download manager to carry out the user requests on the particular digital media playback device.

30 12. The system of claim 1, wherein the download manager resides on a hardware platform and the digital media playback device is intermittently connected to the hardware platform.

13. The system of claim 12, wherein the download manager further is operable to cache downloaded media files locally on the hardware platform.

5 14. The system of claim 1, wherein the media file formats include MP3 files, WMA files, SAF files, BMT files, RM files, and VQF files.

15. The system of claim 1, wherein the digital media playback device is a portable device for playback of media files.

10 16. The system of claim 1, wherein the digital media playback device is a non-portable home sound reproduction system.

15 17. The system of claim 1, wherein the digital media playback device is a cellular telephone.

18. The system of claim 1, wherein the digital media playback device comprises a television set top box.

20 19. The system of claim 1, wherein the digital media playback device is a web pad.

20. The system of claim 1, wherein the digital media playback device is an Internet radio device.

25 21. The system of claim 1, wherein the digital media playback device is a hybrid device.

22. The system of claim 1, wherein the digital media playback device is a digital media playback module.

30 23. The system of claim 1, wherein the device-identifying information is obtained from a removable nonvolatile storage medium in the digital media playback device.

24. The system of claim 1, wherein the device-identifying information comprises a unique identification number obtained from the digital media playback device.

5 25. The system of claim 24, wherein the unique identification number is a serial number.

26. The system of claim 1, wherein the device-identifying information further comprises a state of a nonvolatile storage medium in the digital media playback device.

10 27. The system of claim 1, wherein the public communication network is the Internet.

28. A method for delivery of media files to a particular digital media playback device, comprising:

obtaining device-identifying information from a particular digital media playback device with a download manager that is in communication with the digital media playback device;

forwarding the obtained device-identifying information from the download manager to a content server over a public communication network;

receiving the device-identifying information at the content server;

distributing media files from the content server to the download manager in response to the received device-identifying information;

receiving the media files at the download manager;

distributing the received media files to the particular digital media playback device for playback on the digital media playback device.

25 29. The method of claim 28, wherein distributing media files comprises:

obtaining user information from a user database based on the device-identifying information;

obtaining one or more encrypted media files and metadata associated with the encrypted media files from a content database;

obtaining usage rights information for the selected media files from a usage rights database;

obtaining device information from a device database, the device information describing functional capabilities of the digital media playback device;

5 forwarding the obtained user and device information to a license server and receiving a license for the encrypted digital media files; and

distributing the encrypted media files and the license to the download manager over the public communication network.

10 30. The method of claim 28, wherein distributing media files comprises:

obtaining user information from a user database based on the device-identifying information;

obtaining one or more encrypted media files and metadata associated with the encrypted media files from a content database;

15 obtaining usage rights information for the one or more media files from a usage rights database;

obtaining device information from a device database, the device information describing functional capabilities of the digital media playback device;

20 forwarding the obtained user information to a license server and receiving a license for the encrypted media files;

decrypting the encrypted media files using the license;

re-encrypting the decrypted media files, using the device information and the usage rights information, to a file format that is playable only on the particular digital media playback device; and

25 distributing the re-encrypted media files to the download manager over the public communication network.

31. The method of claim 28, wherein distributing media files comprises:

30 obtaining user information from a user database based on the device-identifying information;

obtaining one or more media files and metadata associated with the media files from a content database;

obtaining usage rights information for the selected media files from a usage rights database;

5 obtaining device information from a device database, the device information describing functional capabilities of the digital media playback device;

forwarding the obtained user and device information to a license server and receiving a license for the digital media files; and

10 distributing the media files and the license to the download manager over the public communication network.

32. The method of claim 28, wherein distributing media files comprises:

obtaining user information from a user database based on the device-identifying information;

15 obtaining one or more media files and metadata associated with the media files from a content database;

obtaining usage rights information for the one or more media files from a usage rights database;

20 obtaining device information from a device database, the device information describing functional capabilities of the digital media playback device;

encrypting the media files, using the device information and usage rights information, to a file format that is playable only on the digital media playback device; and

distributing the encrypted media files to the download manager over the public communication network.

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33. The method of claim 28, further comprising:

displaying representations of media files that are playable on the digital media playback device to a user in a web browser.

30 34. The method of claim 28, further comprising:

receiving user requests for controlling the function of the particular digital media playback device, the user requests being supplied by a user through a web browser; and
generating control commands to the download manager, the control commands instructing the download manager to carry out the user requests on the particular digital media playback device.

35. The method of claim 28, wherein obtaining device-identifying information comprises: obtaining device-identifying information from a removable nonvolatile storage medium in the digital media playback device.

36. The method of claim 28, wherein obtaining device-identifying information comprises: obtaining a unique identification number from the digital media playback device.

37. The method of claim 28, further comprising:
obtaining a state of a nonvolatile storage medium in the digital media playback device.

38. A system for providing media content to digital media playback devices, comprising: an application server for assembling media content and transmit the assembled media content to digital media playback devices, the application server being configured to:

receive device-identifying information derived from a digital media playback device;

securely authenticate the digital media playback device based on the received device-identifying information;

obtain media content and usage rights;

assemble the media content and the usage rights into a format that can be rendered on the authenticated digital media playback device; and

transmit the assembled media content and usage rights to the digital media playback device.

39. The system of claim 38, wherein the application server further is configured to generate and distribute instructions for remote management of the media content on the digital media playback device.

5 40. The system of claim 39, wherein the instructions for remote management comprise instructions to add specific media content to existing media content on the digital media playback device.

10 41. The system of claim 39, wherein the instructions for remote management comprise instructions to remove specific media content from the digital media playback device.

42. The system of claim 39, wherein the instructions to remove specific media content are generated in response to a request from a user.

15 43. The system of claim 41, wherein the instructions to remove specific media content are generated automatically when a predetermined time period expires, if the specific media content on the playback device is time limited.

20 44. The system of claim 39, wherein the instructions for remote management comprise instructions to change the sequence of media content that is listed in a playback list on the digital media playback device.

25 45. The system of claim 39, wherein the instructions for remote management comprise instructions to play back media content selected from existing media content on the digital media playback device.

46. The system of claim 38, wherein the application server is configured to obtain media content and usage rights by:

30 obtaining user information from a user database based on the device-identifying information;

obtaining one or more encrypted media files and metadata associated with the encrypted media files from a content database;

obtaining usage rights information for the selected media files from a usage rights database;

5 obtaining device information from a device database, the device information describing functional capabilities of the digital media playback device;

wherein the application server is configured to assemble the media content and the usage rights by:

10 forwarding the obtained user and device information to a license server and receiving a license for the encrypted digital media files; and

wherein the application server is configured to transmit the assembled media content and usage rights by:

transmitting the encrypted media files and the license to the digital media playback device over a public communication network.

15 47. The system of claim 38, wherein the application server is configured to obtain media content and usage rights by:

obtaining user information from a user database based on the device-identifying information;

20 obtaining one or more encrypted media files and metadata associated with the encrypted media files from a content database;

obtaining usage rights information for the one or more media files from a usage rights database;

25 obtaining device information from a device database, the device information describing functional capabilities of the digital media playback device;

wherein the application server is configured to assemble the media content and the usage rights by:

forwarding the obtained user information to a license server and receiving a license for the encrypted media;

30 decrypting the encrypted media files using the license;

re-encrypting the decrypted media files, using the device information and the usage rights information, to a file format that is playable only on the digital media playback device; and

wherein the application server is configured to transmit the assembled media content and usage rights by:

transmitting the re-encrypted media files to the download manager over a public communication network.

48. The system of claim 38, wherein the application server is configured to obtain media content and usage rights by:

obtaining user information from a user database based on the device-identifying information;

obtaining one or more media files and metadata associated with the media files from a content database;

obtaining usage rights information for the selected media files from a usage rights database;

obtaining device information from a device database, the device information describing functional capabilities of the digital media playback device;

wherein the application server is configured to assemble the media content and the usage rights by:

forwarding the obtained user and device information to a license server and receiving a license for the digital media files; and

wherein the application server is configured to transmit the assembled media content and usage rights by:

transmitting the media files and the license to the digital media playback device over a public communication network.

49. The system of claim 38, wherein the application server is configured to obtain media content and usage rights by:

obtaining user information from a user database based on the device-identifying information;

obtaining one or more media files and metadata associated with the media files from a content database;

obtaining usage rights information for the one or more media files from a usage rights database;

5 obtaining device information from a device database, the device information describing functional capabilities of the digital media playback device;

wherein the application server is configured to assemble the media content and the usage rights by:

10 encrypting the media files, using the device information and usage rights information, to a file format that is playable only on the digital media playback device; and

wherein the application server is configured to transmit the assembled media content and usage rights by:

transmitting the encrypted media files to the download manager over a public communication network.

15 50. The system of claim 38, wherein the application server is coupled to communicate with

a user database operable to authenticate one or more users and playback devices;

a content database containing media files;

20 a license server operable to issue licenses associated with the media files in the content database;

a device database for identifying the capabilities of a device; and

a usage rights database containing usage rights information for each media file in the content database.

25 51. The system of claim 50, wherein the user database further is operable to maintain information about the media content on the digital media playback devices.

30 52. In an application server, a method for providing media content to digital media playback devices, comprising:

receiving device-identifying information derived from a digital media playback device;

securely authenticating the digital media playback device based on the received device-identifying information;

5 obtaining media content and usage rights;

assembling the media content and the usage rights into a format that can be rendered on the authenticated digital media playback device; and

transmitting the assembled media content and usage rights to the digital media playback device.

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53. The method of claim 52, further comprising:

generating and distributing instructions for remote management of the media content on the digital media playback device.

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54. The method of claim 53, wherein generating and distribute instructions comprises:

generating and distributing instructions for adding specific media content to existing media content on the digital media playback device.

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55. The method of claim 53, wherein generating and distribute instructions comprises:

generating and distributing instructions for removing specific media content from existing media content on the digital media playback device.

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56. The method of claim 55, wherein generating and distribute instructions comprises:

generating and distributing instructions for removing specific media content in response to a request from a user.

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57. The method of claim 55, wherein generating and distribute instructions comprises:

generating and distributing instructions for removing specific media content when a predetermined time period expires, if the specific media content is time limited.

58. The method of claim 53, wherein generating and distribute instructions comprises:

generating and distributing instructions for changing the sequence of media content that is listed in a playback list on the digital media playback device.

59. The method of claim 53, wherein generating and distribute instructions comprises:
5 generating and distributing instructions for playing back media content selected from existing media content on the digital media playback device.

60. The method of claim 52, wherein obtaining media content and usage rights comprises:

10 obtaining user information from a user database based on the device-identifying information;

obtaining one or more encrypted media files and metadata associated with the encrypted media files from a content database;

15 obtaining usage rights information for the selected media files from a usage rights database;

obtaining device information from a device database, the device information describing functional capabilities of the digital media playback device;

wherein the application server is configured to assemble the media content and the usage rights by:

20 forwarding the obtained user and device information to a license server and receiving a license for the encrypted digital media files; and

wherein the application server is configured to transmit the assembled media content and usage rights by:

25 transmitting the encrypted media files and the license to the digital media playback device over a public communication network.

61. The system of claim 52, wherein obtaining media content and usage rights comprises:
obtaining user information from a user database based on the device-identifying information;

30 obtaining one or more encrypted media files and metadata associated with the encrypted media files from a content database;

obtaining usage rights information for the one or more media files from a usage rights database;

obtaining device information from a device database, the device information describing functional capabilities of the digital media playback device;

5 wherein the application server is configured to assemble the media content and the usage rights by:

forwarding the obtained user information to a license server and receiving a license for the encrypted media files;

decrypting the encrypted media files using the license;

10 re-encrypting the decrypted media files, using the device information and the usage rights information, to a file format that is playable only on the digital media playback device; and

wherein the application server is configured to transmit the assembled media content and usage rights by:

15 transmitting the re-encrypted media files to the download manager over a public communication network.

62. The method of claim 52, wherein obtaining media content and usage rights comprises:

20 obtaining user information from a user database based on the device-identifying information;

obtaining one or more media files and metadata associated with the media files from a content database;

25 obtaining usage rights information for the selected media files from a usage rights database;

obtaining device information from a device database, the device information describing functional capabilities of the digital media playback device;

wherein the application server is configured to assemble the media content and the usage rights by:

30 forwarding the obtained user and device information to a license server and receiving a license for the digital media files; and

wherein the application server is configured to transmit the assembled media content and usage rights by:

transmitting the media files and the license to the digital media playback device over a public communication network.

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63. The system of claim 52, wherein obtaining media content and usage rights comprises: obtaining user information from a user database based on the device-identifying information;

10 obtaining one or more media files and metadata associated with the media files from a content database;

obtaining usage rights information for the one or more media files from a usage rights database;

obtaining device information from a device database, the device information describing functional capabilities of the digital media playback device;

15 wherein the application server is configured to assemble the media content and the usage rights by:

encrypting the media files, using the device information and usage rights information, to a file format that is playable only on the digital media playback device; and

20 wherein the application server is configured to transmit the assembled media content and usage rights by:

transmitting the encrypted media files to the download manager over a public communication network.

64. The method of claim 52, further comprising:

25 maintaining information about the media content on the digital media playback devices.